

Work Order ID 158774

Tuesday, April 04, 2017 1:00:51 PM

158774

Page 1

Item ID: D2600-3-BENT-RH

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Extrusion Bent RH

Start Date: 4/6/2017 Start Qty: 15.00

15

Cust Item ID:

Required Date: 4/11/2017 Req'd Qty: 15.00

15

Customer:

Reference: SCHEDULED

Approvals: Process Plan:

DAS

21

9-89

Date:

APR 04 2017

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start ***NR1***Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D2600	Rev E								
D2750	G								
100	BENDING MACHINE - SKIDTUBES	1.35							
100									
CNC Bend 1	Memo	6.20							
CNC Delta 100 Bender	Pick qty 1 D2600-3-130 extrusion								
	1-Deburr one end of extrusion								
	2-Bend using CNC bending machine as per program 2750.C and Folio 14 use bending aid DT9635								
	3- cut fwd end of tube as per dwg D2750								
	4- cut aft end of tube as per dwg D2750								
110	QC5- Inspect part completeness to step on W/O	0.00							
110									
QC	Memo	0.30							
Quality Control									

13
17-04-12
TW
MKG

15
17-04-12
BR

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☒ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : <u>17/4/12</u>	Step #: <u>100</u>	QTY Effective : <u>1</u>		MRB (QSI042) Approval <u>DAS</u> <u>12</u> <u>9-89</u>	
Description Work Order Deviation <u>one skid measuring - 11.78" height</u> <u>- 112.400" Long</u>		Disposition <u>Acceptable</u>		Completed By <u>DAS</u> <u>12</u> <u>9-89</u>	
				Lead hand / Supervisor Approval Verification <u>[Signature]</u> <u>17-4-12</u>	
				QC / QA Coordinator Approval <u>[Signature]</u> <u>APR 12 2017</u>	

Root Cause			FAULT CATEGORY		
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	☒ Over/Under tolerance
Equip/Tooling ☒	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
Past Expiry Date ☐	Manufacturing Process ☐				
Misidentified ☐	Past Due ☐	OTHER : _____			

Work Order ID 158774

Tuesday, April 04, 2017 1:00:51 PM

158774

Page 2

Item ID: D2600-3-BENT-RH**Accept*****N900040100*****Setup Start*****NS1*****Revision ID:****Stop*****NS2*****Item Name:** Extrusion Bent RH**Start Date:** 4/6/2017 **Start Qty:** 15.00***15*****Cust Item ID:****Required Date:** 4/11/2017 **Req'd Qty:** 15.00***15*****Customer:****Reference:** SCHEDULED**Approvals:****Process Plan:** _____**Date:** _____**Tooling:** _____**Date:** _____**Run Start*****NR1*****QC:** _____**Date:** _____**SPC (Y/N):** _____**Date:** _____**Stop*****NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	Identify as per dwg & Stock Location <u>LG002</u>	0.00				(15)	0		TW
120									
Packaging	Memo	0.15							
Packaging	LOCATION :LG002								
									17-04-12
130	QC21- Final Inspection - Work Order Release	0.00							
130									
QC	Memo	1.50							
Quality Control									17/4/13

DAS
21
9-89

APR 13 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : _____					

Picklist Print

Tuesday, April 04, 2017 1:00:51 PM

Page 1

Work Order ID: 158774

158774

Parent Item: D2600-3-BENT-RH

D2600-3-BENT-RH

Parent Item Name: Extrusion Bent RH

Start Date: 4/6/2017

Required Date: 4/11/2017

Start Qty: 15.00

Required Qty: 15.00

Comments: IPP REV:A 14.01.14 NEW ISSUE DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2600-3-130		Manufactured	No			100	Each	67.0000	1	15			
D2600-3-130									**				
Extrusion Round 3" 350													

JW 17-04-12

Location

Loc Qty

Loc Code

LG

12

138061

12

LG002

55

150069

55

15

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

SPECIFICATION CONTROL DRAWING

D2600-X-XXX EXTRUSION

NOTES:



- 1) MATERIAL: 6061-T6 ALUMINUM PER QQ-A-200/8 OR AMS-QQ-A-200/8 OR ASTM B221

MINIMUM TENSILE YIELD STRENGTH = 35 KSI
MINIMUM ULTIMATE TENSILE STRENGTH = 40 KSI
MINIMUM ELONGATION = 8%

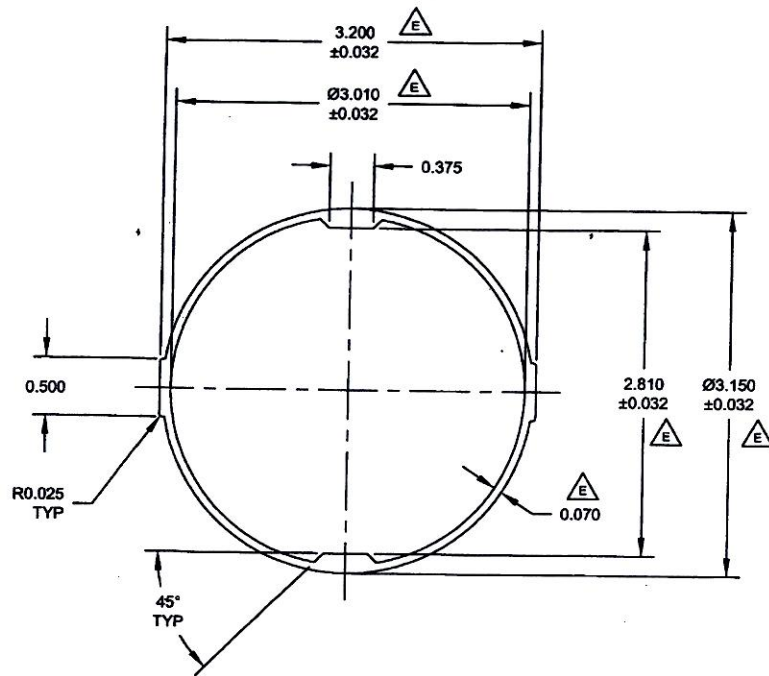
A SAMPLE FROM EACH BATCH WILL BE PULL TESTED TO ASTM STANDARD B221 BY AN APPROVED TESTING FACILITY TO ENSURE THAT THE BATCH MEETS THE ABOVE MINIMUM MECHANICAL PROPERTIES

- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N & B/N PER DART QSI 044 6.1 (FINE POINT PERMANENT INK MARKER)
- 7) WEIGHT: D2600-1 = 0.078 lb/in, D2600-3 = 0.130 lb/in, D2600-5 = 0.045 lb/in, D2600-7 = 0.091 lb/in
- 8) NO TOOLING MARKS
- 9) FOR D2600-1, PART NUMBER IS D2600-1-XXX WHERE XXX IS CUT LENGTH (EX. D2600-1-160 IS 160" LONG).
D2600-1 EXTRUSION MANUFACTURED FROM:
- CARADON INDALEX DIE # MH-18870
- SIGNATURE ALUMINUM (BON-L) DIE # 897121
- 10) FOR D2600-3, PART NUMBER IS D2600-3-XXX WHERE XXX IS CUT LENGTH (EX. D2600-3-120 IS 120" LONG).
D2600-3 EXTRUSION MANUFACTURED FROM:
- CARADON INDALEX DIE # MH-18859
- SIGNATURE ALUMINUM (BON-L) DIE # 897122
- 11) FOR D2600-5, PART NUMBER IS D2600-5-XXX WHERE XXX IS CUT LENGTH (EX. D2600-5-108 IS 108" LONG).
D2600-5 EXTRUSION MANUFACTURED FROM:
- CARADON INDALEX DIE # MS-18871
- 12) FOR D2600-7, PART NUMBER IS D2600-7-XXX WHERE XXX IS CUT LENGTH (EX. D2600-7-125 IS 125" LONG).
D2600-7 EXTRUSION MANUFACTURED FROM:
- CARADON INDALEX DIE # MS-18872

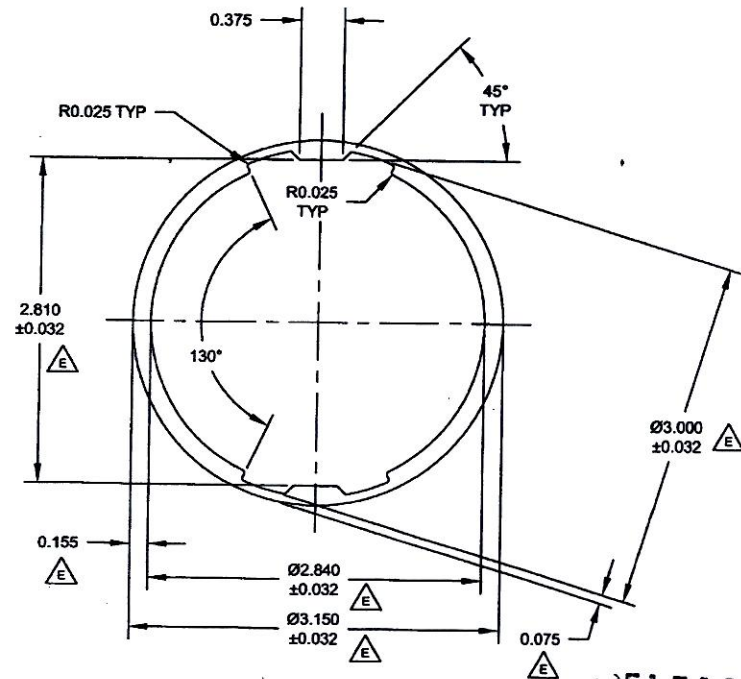
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WORK ORDER
NO. 158774 MJS
1704-04

RELEASED
2012-01-11

E	REFORMAT DWG; ALL DIMS & TOL. UPDATE TO MATCH MFG DIE DWGS; ADD ASTM B221 SPEC (D8-1)	CP	11.10.18
D	INCREASE MIN. UTS TO 40 KSI	DS	98.08.20
C	ADD D2600-3, UPDATE D2600-1 WIDTH, ADD DIE NO.	DS	98.04.16
B	CHANGE MATERIAL SPEC.	DS	97.09.09
A	NEW ISSUE	DS	97.01.21
REV.	DESCRIPTION	BY	DATE
DESIGN	<i>[Signature]</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	<i>[Signature]</i>		
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. E
MFG. APPR.	<i>[Signature]</i>	D2600	SHEET 1 OF 3
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	EXTRUSION	NTS
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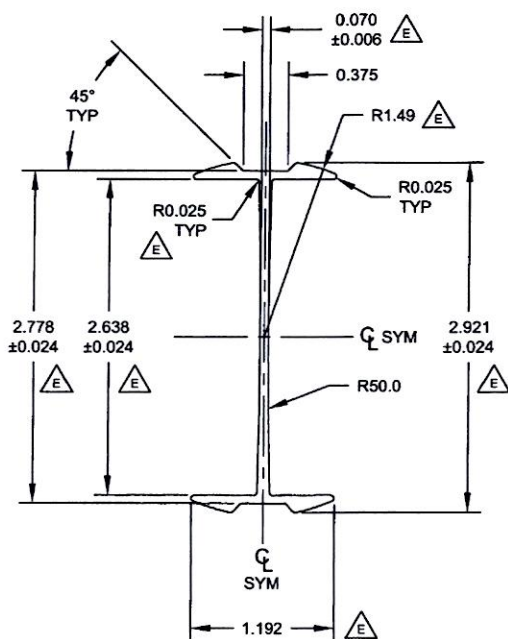
D2600-1 EXTRUSION



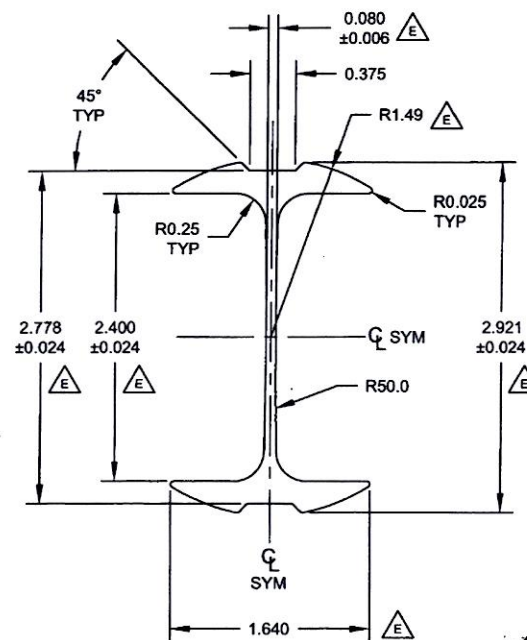
D2600-3 EXTRUSION

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CHECKED	ASS	DRAWING NO.	REV. E
MFG. APPR.	E	D2600	SHEET 2 OF 3
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D2600-5 EXTRUSION



D2600-7 EXTRUSION

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2012-01-11
JAW

DESIGN	#	DART AEROSPACE LTD	
DRAWN	φ	HAWKESBURY, ONTARIO, CANADA	
CHECKED	ASS	DRAWING NO.	REV. E
MFG. APPR.	ER	D2600	SHEET 3 OF 3
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QTY -041	QTY -042	QTY -043	QTY -044	PART NUMBER	DESCRIPTION
X				D2750-041	350 SKIDTUBE ASSEMBLY, LH
	X			D2750-042	350 SKIDTUBE ASSEMBLY, RH
		X		D2750-043	350 SKIDTUBE ASSEMBLY, LH
			X	D2750-044	350 SKIDTUBE ASSEMBLY, RH
1	1	1	1	D2739	WEB
8	8	8	8	D2743	SPACER
1	1	1	1	D2744	CAP
8	8	8	8	D2745	BUSHING
1				D2750-1	SKIDTUBE WELDMENT, LH
	1			D2750-2	SKIDTUBE WELDMENT, RH
		1		D2750-3	SKIDTUBE WELDMENT, LH
			1	D2750-4	SKIDTUBE WELDMENT, RH
1		1		D3488-041	BLADE FITTING, LH
	1		1	D3488-042	BLADE FITTING, RH
4	4	4	4	D3490-1	SPACER
4	4			D3490-3	SPACER
		4	4	D3490-5	SPACER
8	8	8	8	D3492-041	PLUG ASSEMBLY
8	8			D3492-043	PLUG ASSEMBLY
		8	8	D3492-045	PLUG ASSEMBLY
1	1	1	1	D3535-25	WEARSHOE
1	1	1	1	D3536-25	GASKET
3	3	3	3	D3537-1	WEARPAD
8	8	8	8	D3631-1	WASHER
1	1	1	1	D3791-1	WEARPLATE
1	1	1	1	D3793-1	WEARSHOE
1	1	1	1	D3793-3	WEARSHOE
1	1	1	1	D3794-1	GASKET
1	1	1	1	D3794-3	GASKET
38	38	38	38	ALS4-1032-225	INSERT (OR ALS7-1032-225, AKS4-1032-225, AELS-1032-225)
34	34	34	34	AN3C5A	BOLT
4	4	4	4	AN3C6A	BOLT
4	4	4	4	AN6C44A	BOLT
1	1	1	1	AN8C35A	BOLT
38	38	38	38	AN960C10L	WASHER
1	1	1	1	AN960C816L	WASHER
4	4	4	4	MS21043-6	NUT
1	1	1	1	MS21083C8	NUT
4	4	4	4	NAS1515H3L	WASHER

GENERAL NOTES:

- MATERIAL: MAKE D2750-1/-2/-3/-4 FROM D2600-3 EXTRUSION (INITIAL LENGTH = 120.0).
- FINISH: ACID ETCH, ALODINE ASSEMBLY PER DART QSI 005 4.1 PRIOR TO INSTALLING D2739 WEB.
STANDARD: PRIME (REF. 4.2.1.3.3) AND PAINT WHITE PER DART QSI 005 4.2
OPTIONAL: POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT AS INDICATED TO 1.0 ABOVE SKIDTUBE CENTER-LINE PER DART 005 4.4 (OPTIONAL).
- TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- UNITS: INCHES UNLESS OTHERWISE NOTED
- BREAK SHARP EDGES: N/A
- IDENTIFICATION: N/A
- WEIGHT: D2750-041/-042/-043/-044 = 26.5 LBS
- WELD PER DART QSI 004
- INSTALL ALS4-1032-225 INSERTS AFTER FINISH AS INDICATED. DRILL 'F' SIZE HOLES (Ø0.297) FOR WEARSHOE INSERTS
- FINAL CONFIGURATION SHOULD HAVE THE FOLLOWING MINIMUM MECHANICAL PROPERTIES:
MINIMUM YIELD TENSILE STRENGTH = 35 KSI
MINIMUM ULTIMATE TENSILE STRENGTH = 38 KSI
- COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF FINISH WITH MEK DEGREASER.
- SPACER AND PLUG INSTALLED SAME AS SECTION AJ-AJ EXCEPT HORIZONTAL
- SPACER AND PLUG INSTALLED SAME AS SECTION AP-AP EXCEPT HORIZONTAL

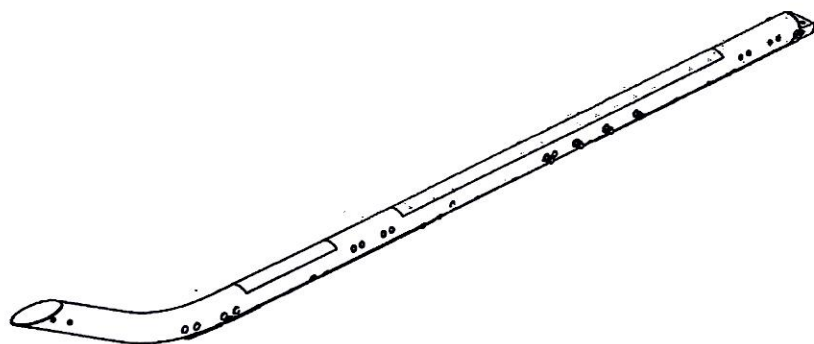
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2013-08-13

G	CORRECTED TOLERANCE ON Ø0.500 THRU HOLE: IS +0.010/-0.000, WAS +0.100/-0.000 (ZN B3-4, B2-5); ADD VIEW TO CONTROL FWD BEND ORIENTATION (ZN D-1-4/-5-6-7); UPDATED FINISH OPTIONS; INSIDE OF TUBE NO LONGER SPRAYED WITH LPS-3. REASON: PAR13-276 AND NCR13-2757	MB	13.07.11
F	INCORPORATE DSI 9413; QTY (3) D3537-1 WAS QTY (5) (ZN C8-1); D3791-1/-3 REPLACES D3535-13/-35 (ZN C8-1); D3794-1/-3 REPLACES D3536-13/-35 (ZN B8-1); ADD D3791-1 (ZN C8-1); WEARSHOE HOLES UNDER FWD/AFT SADDLE REMOVED (8 PL); WEARSHOE HARDWARE QTY UPDATED (ZN B8-1); D3488-041/-042 HARDWARE UPDATED (ZN C1-8, 9, 10, 11); ADD NOTE 12 AND 13 (ZN A6-1); REASON: REF. NCR 08-043	PH	08.07.16
E	CHANGE TO STAINLESS STEEL WEARPLATES; ADD RUBBER GASKETS; CHANGE INSERTS; ADD D3631-1; REMOVE QTY (38) NAS1515H3L; REMOVE QTY (10) NAS1515H8L; REMOVE D2741; QTY (2) AN960C816; REMOVE QTY (2) MS21083C8	CB	07.05.17
D	ADD HOLES AND SPACERS FOR APICAL FLOATS; INCORPORATE DEO 9133/9157	PH	06.01.05
C	ADD D2750-3/D2750-4; INCORPORATE D2738 AND D2740	CP	98.11.18
B	CHANGE MS24694-S293 TO AN6-16A	CP	98.09.01
A	NEW ISSUE	DS	98.04.16
REV.	DESCRIPTION	BY	DATE
DESIGN	MM		
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	13.07.11		

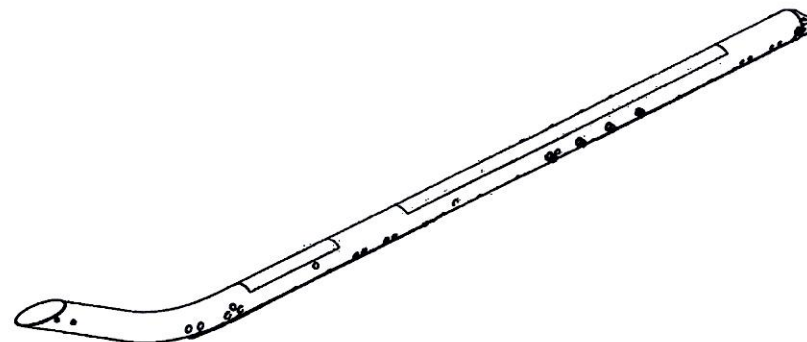
DART AEROSPACE USA, INC.
KENT, WA

DRAWING NO. **D2750** REV. G
TITLE **350 SKIDTUBE ASSEMBLY** NTS
SHEET 1 OF 11
SCALE

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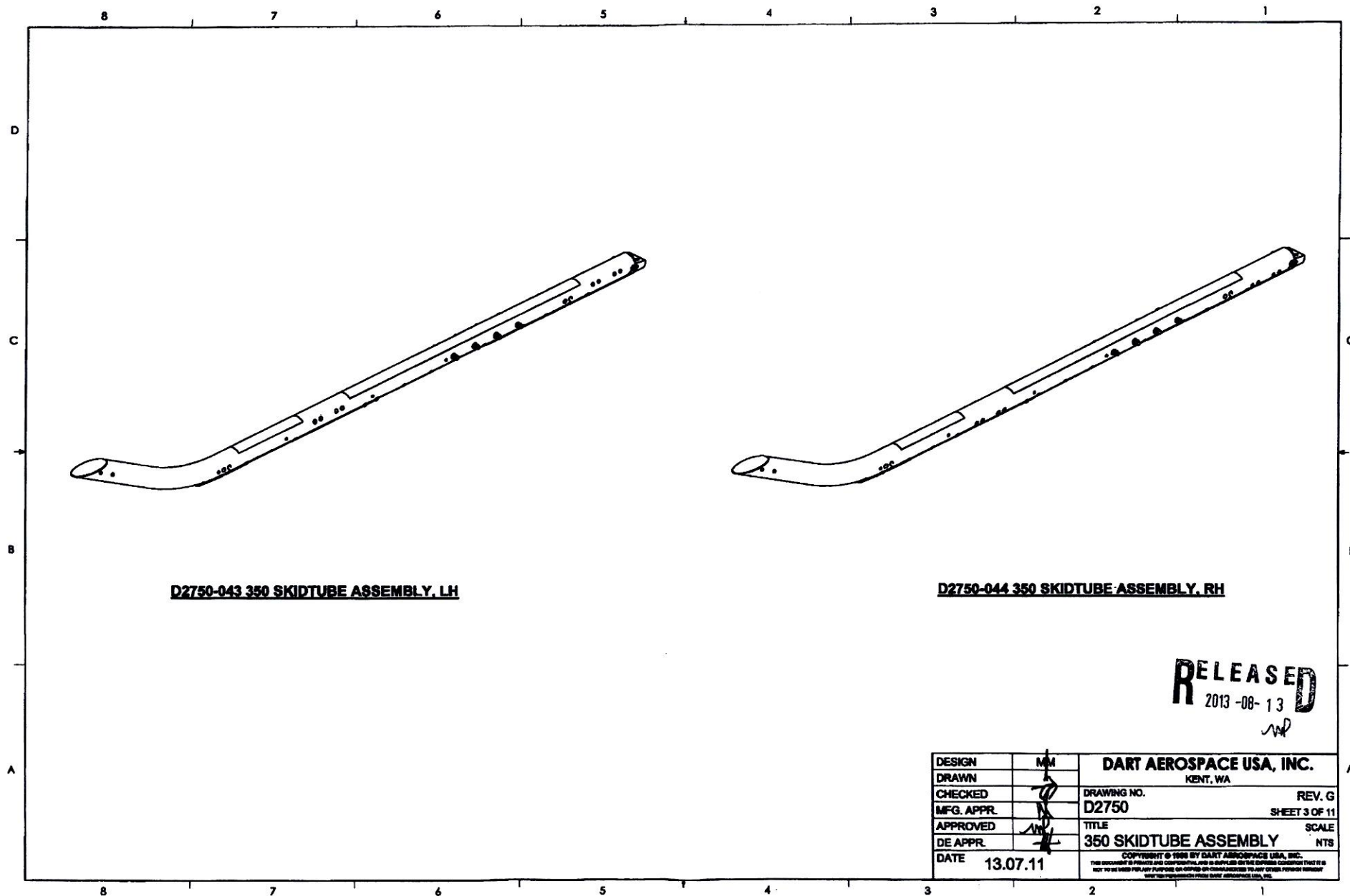
D2750-041 350 SKIDTUBE ASSEMBLY, LH

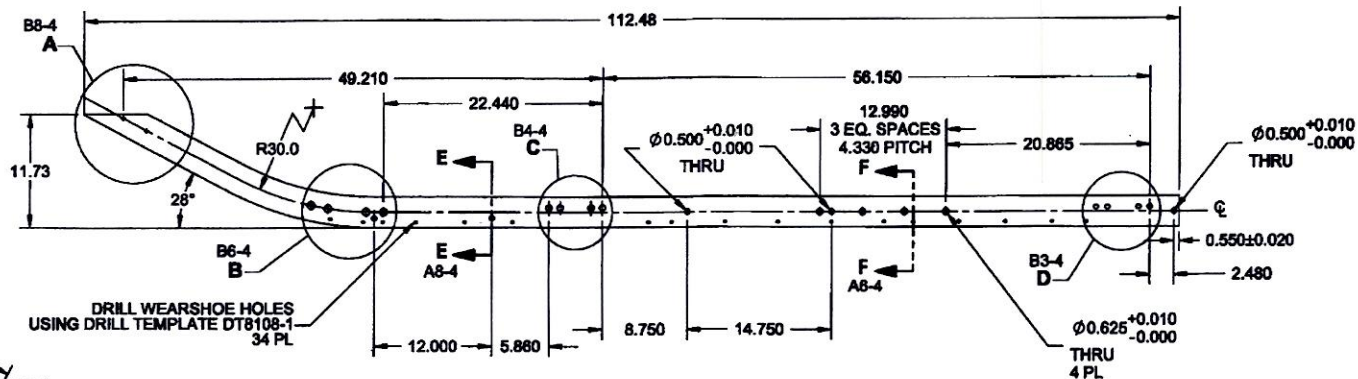


D2750-042 350 SKIDTUBE ASSEMBLY, RH

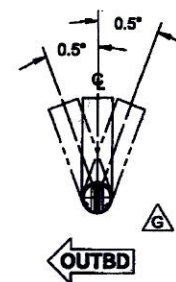
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2013-08-13
MP

DESIGN	MM	DART AEROSPACE USA, INC.	
DRAWN		KENT, WA	
CHECKED		DRAWING NO. D2750	REV. G
MFG. APPR.		SHEET 2 OF 11	
APPROVED		TITLE	SCALE
DE APPR.		350 SKIDTUBE ASSEMBLY	NTS
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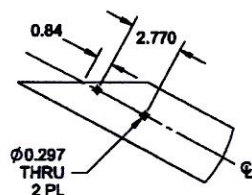




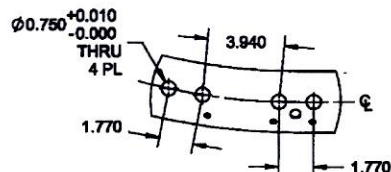
D2750-1 LH SKIDTUBE



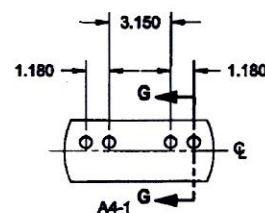
MAX ALLOWABLE
TWIST ON FWD BEND
(VIEWED LOOKING FWD)



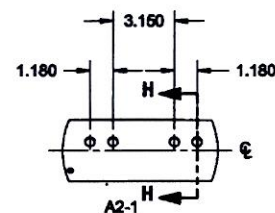
DETAIL A
SCALE 2X



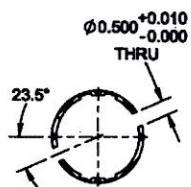
DETAIL B
SCALE 2X



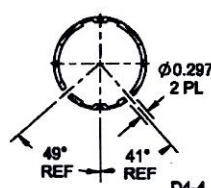
DETAIL C
SCALE 2X



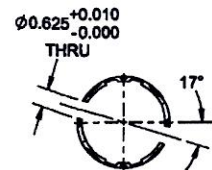
DETAIL D
SCALE 2X



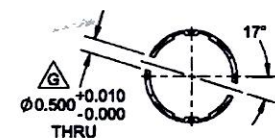
SECTION E-E
SCALE 3X, 2 PL



SECTION F-F
SCALE 3X, 17 PL



SECTION G-G
SCALE 3X, 4 PL



SECTION H-H
SCALE 3X, 4 PL

RELEASED
2013-08-13

DESIGN	MM	DART AEROSPACE USA, INC.
DRAWN		KENT, WA
CHECKED		DRAWING NO. D2750
MFG. APPR.		REV. G
APPROVED		SHEET 4 OF 11
DE APPR.		TITLE 350 SKIDTUBE ASSEMBLY
DATE	13.07.11	SCALE NTS

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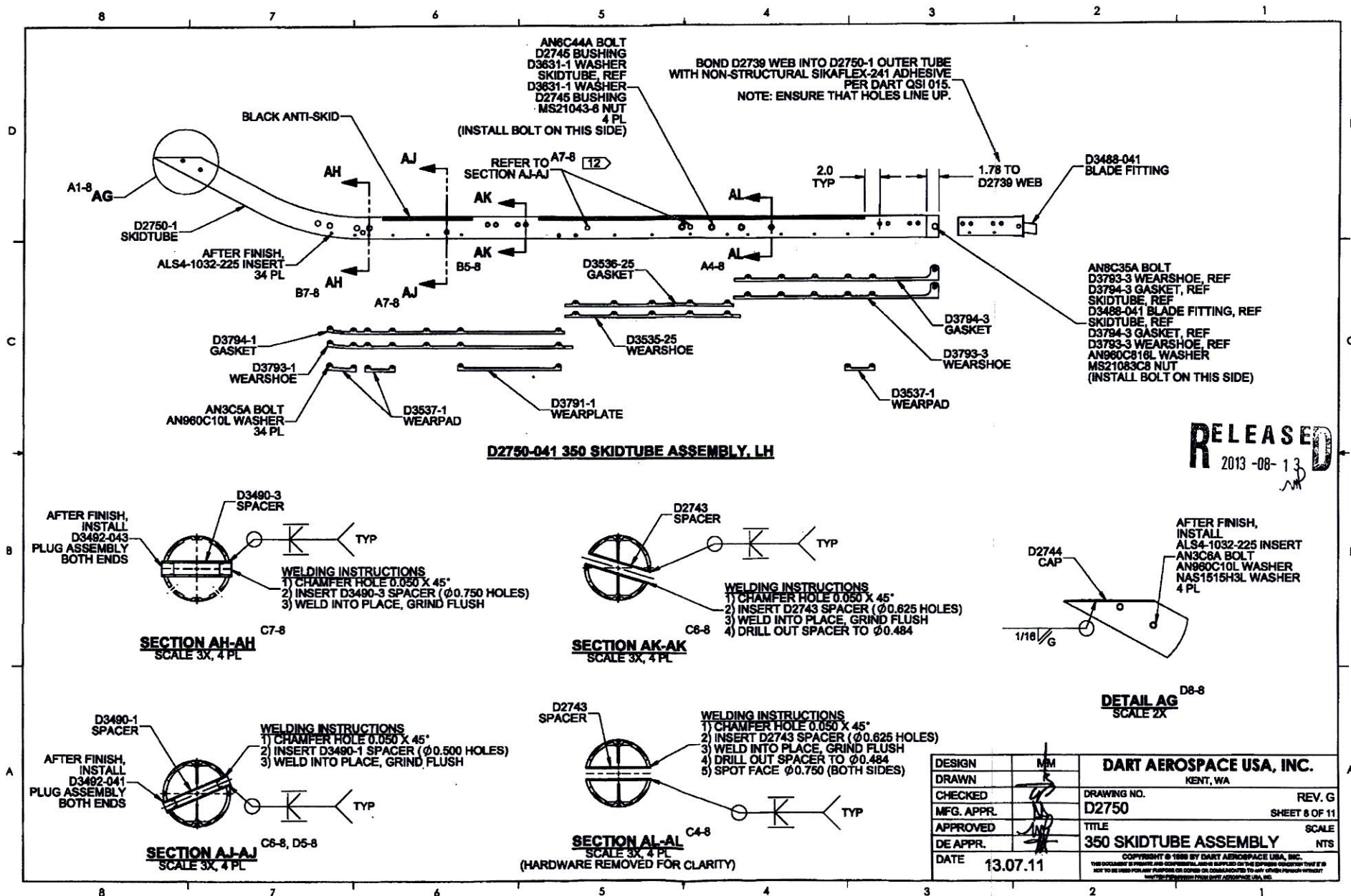


0.84
2.770
Ø0.297
THRU
2 PL

SECTION X-X
SCALE 3X, 4 PL

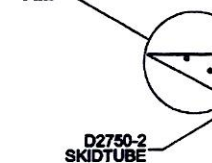
RELEASE
2013-08-13
mp

DESIGN	MM	DART AEROSPACE USA, INC.	
DRAWN		KENT, WA	
CHECKED		DRAWING NO.	REV. G
MFG. APPR.		D2750	SHEET 6 OF 11
APPROVED		TITLE	SCALE
DE APPR.		350 SKIDTUBE ASSEMBLY	NTS
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8 7 6 5 4 3 2 1

A1-9
AM



D2750-2
SKIDTUBE
AFTER FINISH,
ALS4-1032-225 INSERT
34 PL

BLACK ANTI-SKID

(INSTALL NUT ON THIS SIDE)
REFER TO
SECTION AP-AP

AN8C44A BOLT
D2745 BUSHING
D3631-1 WASHER
SKIDTUBE, REF
D3631-1 WASHER
D2745 BUSHING
MS21043-6 NUT
4 PL

BOND D2739 WEB INTO D2750-2 OUTER TUBE
WITH NON-STRUCTURAL SIKAFLEX-241 ADHESIVE
PER DART QSI 015.
NOTE: ENSURE THAT HOLES LINE UP.

1.78 TO
D2739 WEB

D3488-042
BLADE FITTING

AN8C35A BOLT
D3793-3 WEARSHOE, REF
D3784-3 GASKET, REF
SKIDTUBE, REF
D3488-042 BLADE FITTING, REF
SKIDTUBE, REF
D3784-3 GASKET, REF
D3793-3 WEARSHOE, REF
AN8C0C816L WASHER
MS21083C8 NUT
(INSTALL NUT ON THIS SIDE)

AN3C5A BOLT
AN960C10L WASHER
34 PL

D3794-1
GASKET

D3793-1
WEARSHOE

D3537-1
WEARPAD

D3791-1
WEARPLATE

D3536-25
GASKET

D3535-25
WEARSHOE

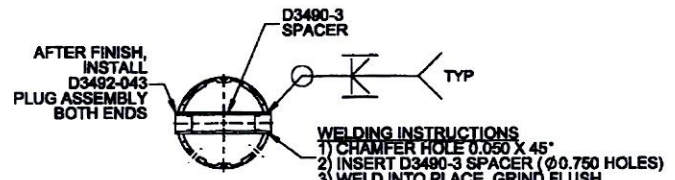
D3794-3
GASKET

D3793-3
WEARSHOE

D3537-1
WEARPAD

D2750-042 350 SKIDTUBE ASSEMBLY, RH

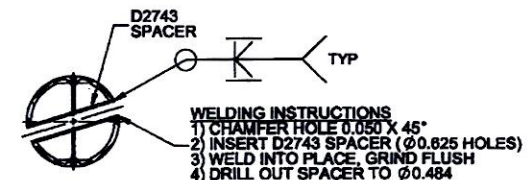
RELEASED
2013-08-13



AFTER FINISH,
INSTALL
D3492-043
PLUG ASSEMBLY
BOTH ENDS

WELDING INSTRUCTIONS
1) CHAMFER HOLE 0.050 X 45°
2) INSERT D3490-3 SPACER (Ø 0.750 HOLES)
3) WELD INTO PLACE, GRIND FLUSH

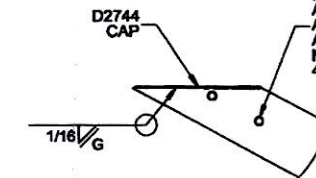
SECTION AN-AN SCALE 3X, 4 PL



D2743
SPACER

WELDING INSTRUCTIONS
1) CHAMFER HOLE 0.050 X 45°
2) INSERT D2743 SPACER (Ø 0.625 HOLES)
3) WELD INTO PLACE, GRIND FLUSH
4) DRILL OUT SPACER TO Ø 0.484

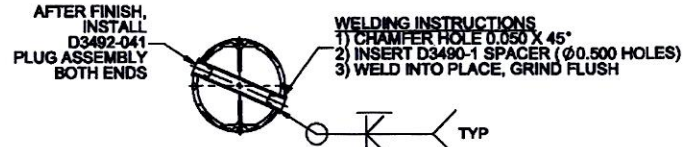
SECTION AQ-AQ SCALE 3X, 4 PL



D2744
CAP

AFTER FINISH,
INSTALL
ALS4-1032-225 INSERT
AN3C6A BOLT
AN960C10L WASHER
NAS1515H3L WASHER
4 PL

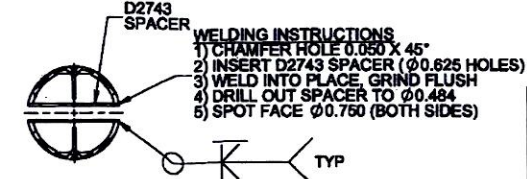
DETAIL AM SCALE 2X



AFTER FINISH,
INSTALL
D3492-041
PLUG ASSEMBLY
BOTH ENDS

WELDING INSTRUCTIONS
1) CHAMFER HOLE 0.050 X 45°
2) INSERT D3490-1 SPACER (Ø 0.500 HOLES)
3) WELD INTO PLACE, GRIND FLUSH

SECTION AP-AP SCALE 3X, 4 PL



D2743
SPACER

WELDING INSTRUCTIONS
1) CHAMFER HOLE 0.050 X 45°
2) INSERT D2743 SPACER (Ø 0.625 HOLES)
3) WELD INTO PLACE, GRIND FLUSH
4) DRILL OUT SPACER TO Ø 0.484
5) SPOT FACE Ø 0.750 (BOTH SIDES)

SECTION AR-AR SCALE 3X, 4 PL (HARDWARE REMOVED FOR CLARITY)

DESIGN	MM	DART AEROSPACE USA, INC.	
DRAWN		KENT, WA	
CHECKED		DRAWING NO.	REV. G
MFG. APPR.		D2750	SHEET 9 OF 11
APPROVED		TITLE	SCALE
DE APPR.		350 SKIDTUBE ASSEMBLY	NTS
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